Science 7

“Classification of Rocks and Minerals”

Rocks and minerals can be placed in different groups in several different

ways. Rocks and minerals are often classified based on how they are created. For

example, all igneous rocks are created by high temperatures and high pressures.

This process often takes place near volcanoes. Sedimentary rocks are formed by

weathering and compaction (pressure), while metamorphic rocks are formed by

high pressure and heat.

Rocks and minerals can also be categorized based on their unique properties.

Rocks are made up of one or more mineral. Minerals can be made of one or more

pure substances. Granite is a combination of the minerals quartz, hornblende,

feldspar, and mica. These rocks and minerals have different properties or

characteristics. Geologists often use hardness, lustre, color, steak, cleavage &

fracture to help sort rocks.

Match each property with its definition. (Pgs. 281-283)

|  |  |
| --- | --- |
| 1. Hardness | 1. Is the appearance of light reflected from a rock or mineral. |
| 1. Lustre | 1. Is the color of a powder form of a mineral. |
| 1. Color | 1. Is the “scratchability” of a rock or mineral. |
| 1. Streak | 1. Is the way a rock or mineral breaks. |
| 1. Cleavage & fracture | 1. Is the shininess of a rock or mineral. |

Look at table 10.1 on page 281. Complete the table below. It is used to help compare the hardness of rocks and minerals.

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| --- | --- | --- |
| The Mohs Hardness Scale | | |
| Mineral | Mineral Hardness | Hardness of Common Objects |
| Talc | 1 softest |  |
| Gypsum | 2 |  |
| Calcite | 3 |  |
| Fluorite | 4 |  |
| Apatite | 5 |  |
| Feldspar | 6 |  |
| Quartz | 7 |  |
| Topaz | 8 |  |
| Corundum | 9 |  |
| Diamond | 10 hardest |  |